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The Cognisance, Attitudes and Behaviors of the Health Care Employees in Elazig Province on the Use of Cigarette and Tobacco

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ABSTRACT

Tobacco use is an important healthcare problem causing diseases, death, economic loss and workforce loss. Healthcare staff has a significant task for counteracting such problem the present study was conducted to detect knowledge, attitudes and behaviours of healthcare staff about smoking and tobacco use in Elazıg province. The population of this cross-sectional study consisted of 4543 health workers working in Elazig province and its districts. The number of people to be accepted into the universe; It was selected by systematic sampling method from the lists containing the names of the health personnel working in the province and districts of Elazig, and it was calculated as 1283 people at the 95% confidence interval. The prevalence of smoking was taken as 40% during calculation of the sampling. Totally 1,169 individuals were contacted by repeated visits and the answer rate as 91.11%. Among such 1,169 individuals within the research; 57.3% (n:670) were female, 77.8% were university-graduated, 68.4% were married and 22.4% were physicians. The age average of the individuals was 33.99±9.1 (min:18, max:48). Among the participants, 29.3% still smoke. The rate of the smoker was 21.2% in females and 40.3% in males. The age average of initial age for smoking was 20.13±3.8 (min:10, max:39). The rate of the smokers in the healthcare personnel except the physicians was 29.7%; and the rate of smoker physicians was 28.3%. The smokers with a high or very high addiction level were 23.9% of the smokers. Those who started smoking through effect of their friends were 51.3% of the smokers (n=343); whereas 33.5% of them expressed that they consider quitting. Among the participants; 58.3% avoided smoking due to the harm to the health, 44.8% feel discomfort from the odour and smoke and 29.6% avoided because of health problems experienced by the smokers. Approximately one third of healthcare staff smoke. Addiction levels are high and rates of those who consider quitting is low. Therefore, training programs and regulations that may create an awareness and practices top reduce the rate of smoking are needed for healthcare staff who serve as a role-model for the community.

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INTRODUCTION

Smoking is an important public health problem that causes disease, death, economic loss and loss of workforce. (1, 2). Tobacco consumption continues to be widespread despite it is validated that the use of tobacco is harmful to health (3, 4). Cigarettes, which are widely used in the world and in Turkey, cause many diseases, death, economic and work force losses. This situation neatly reveals the importance of the controlling of the use of cigarette (5).

The importance of health employees is big in the application of the preventing and quitting of smoking cigarette due to the damages which cause in the society in developing healthy life behaviors (such as exercises, prevention of smoking cigarette, etc.) in order to protect from diseases.

It is seen that the recommendations of health care employees about the healthy lifestyle behaviours are effective on the

improvement of health in the individuals. In many studies conducted in1976 and afterwards, it has been shown that physicians are effective in persuading patients to quit or not to start smoking cigarette (6-15).

In a study previously conducted, the success rate of smoking cessation was shown to be 5% in the smoking cessation programs in which physicians only recommend their patients to quit smoking, but on the other hand the success rate of smoking cessation was shown to be 29% in the smoking cessation programs in which physicians intensively support the individuals to quit smoking (16).

Health care employees, especially physicians, are important role models for the society, and they are in the first place in all levels of the society for preventing the beginning of smoking cigarette. For this reason, a large number of studies have been conducted on smoking status among health personnel. It has been observed in developed countries that the use of cigarettes among health care personnel is low. In the studies conducted in developing countries, it has been found that the use of cigarettes among health care personnel is similar to that of the general population (17, 18).

The smoking of a physician can negatively affect his/her daily life or it can lead that physician to be desensitized against the risks that the cigarette will cause, and hence prevent physician to attach necessary importance to preventive health services. The fact that physicians have enough current cognizances about smoking-related diseases and warn individuals about the health effects of smoking is important in creating the awareness that cigarette smoking is not a simple pleasant habit, but an important public health problem that will kill many persons (19).

This study has been aimed to determine the cognizance, attitudes and behaviours of the health care employees in Elazığ Province on the use of cigarette and tobacco.

METHODS

In this cross-sectional study, 4543 health care professionals working in the centrum and districts of Elazığ were included in this study. The number of persons to be sampled was selected by systematic sampling method from the lists of the names of health personnel working in the centrum and districts of Elazığ, and calculated as 1283 persons in 95% confidence interval. The smoking prevalence was accounted as 40% when the sample was taken. With repetitive visits, 1169 people were reached and the response rate was calculated as 91.11%. Those who did not respond consisted of those who did not want to participate in the study, those who were using their annual leave, those who were changing their places and those who were on sick leave.

Table 1. Distribution of the individuals included in the study according to some socio-demographic characteristics.

Socio-demographic characteristics (n=1169)*	Woman		Man		Total		X^2, P value
	n	%	n	%	n	%	
Age Groups							
18-30	321	47.9	151	30.3	472	40.4	
31-40	252	37.6	188	37.7	440	37.6	
41-50	75	11.2	111	22.2	186	15.9	
51 or over	22	3.3	49	9.8	71	6.1	X^2= 64.132 **P= 0.0001**
Total	670	100	499	100	1169	100	
Educational Status							
High School/or equivalent school	144	21.5	91	18.2	235	20.1	
University/Undergraduate	514	76.7	396	79.4	910	77.8	
PhD	12	1.8	12	2.4	24	2.1	X^2= 2.290 P= 0.318
Total	670	100	499	100	1169	100	
Marital Status							
Married	423	63.1	377	75.6	800	68.4	
Single	227	33.9	119	23.8	346	29.6	
Widow/divorced/separate	20	3.0	3	0.6	23	2.0	X^2= 24.430 **P= 0.0001**
Total	670	100	499	100	1169	100	
Status regarding having children (n=823)**							
Yes	360	81.3	326	85.8	686	83.4	
No	83	18.7	54	14.2	137	16.6	X^2= 3.019 **P= 0.05**
Total	443	100	380	100	823	100	
Monthly Income***							
$1318 or below	168	25.1	143	28.7	311	26.6	
$1319 - $3075	373	55.7	233	46.7	606	51.8	
$3076 and over	129	19.3	123	24.6	252	21.6	X^2= 9.689 **P= 0.008**
Total	670	100	499	100	1169	100	

* Those who did not answer, ** Those who were single were not included in the evaluation. *** Calculated based on the dollar exchange rate on the date this study was performed.

Table 2. Professional characteristics of the individuals who were included in the scope of this study.

Professional characteristics	Woman		Man		Total		X^2, P value
	n	%	n	%	n	%	
Occupational Group							
Physician/Dentist	97	14.5	182	36.5	279	23.9	X^2= 1.275
Non-physician healthcare professional	573	85.5	317	63.5	890	76.1	**P= 0.0001**
Total	670	100	499	100	1169	100	
Area of specialization (n=262)*							
Practitioner	28	31.5	58	33.5	86	32.8	
Internal Medicine	43	48.3	71	41.0	114	43.5	
Surgical	18	20.2	44	25.4	62	23.7	X^2= 1.465
Total	89	100	173	100	262	100	P= 0.481
Institution which he/she worked for							
Public Hospital	277	41.3	264	52.9	541	46.3	
University Hospital	175	26.1	85	17.0	260	22.2	
Private Hospitals	56	8.4	53	10.6	109	9.3	
Public Health and Provincial Health Directorate	162	24.2	97	19.4	259	22.2	X^2= 24.342
Total	670	100	499	100	1169	100	**P= 0.0001**
Total working period							
1-120 months	417	62.2	272	54.5	689	58.9	
121-240 months	185	27.6	144	28.9	329	28.1	
241-360 months	61	9.1	68	13.6	129	11.0	X^2= 14.204
360 months or higher	7	1.0	15	3.0	22	1.9	**P= 0.003**
Total	670	100	499	100	1169	100	
Way of working							
In shifts (3 shifts)	140	20.9	51	10.2	191	16.3	
Turn of duty (24 hour watch)	159	23.7	97	19.4	256	21.9	
Regular work hours (08:00-17:00)	371	55.4	351	70.3	722	61.8	X^2= 32.727
Total	670	100	499	100	1169	100	**P= 0.0001**

*Dentists were not included in the study.

A survey consisting of multiple-choice questions was applied to the subjects included by the survey under direct observation by the interviewers who had previously been trained as related to the subject. The survey consists of 4 sections. The first section included the questions related to the general characteristics of the individual, and the second section included the questions related to the smoking status of the individual, the WHO's standard questionnaire and the Fagerström Nicotine Addiction test, and the third section included the questions related to the reasons for starting smoking, and thinking about quitting to smoke, and the fourth section included the questions related to the health risks of smoking, and the attitudes of the individuals related to the anti-smoking law.

By getting the ethical permission from the Non-International Ethical Board of Fırat University, and getting the permission of questionnaire application from the Provincial Public Health Directorate of Elazığ, the fieldwork of this study was conducted between the months of February and April of the year 2015. The data obtained were recorded in the statistical package program, error controls and tables, and the statistical analyzes were done through this program. Averages are given with standard deviations. As the statistical analysis method, X^2 test was used. $p < 0.05$ was deemed to be meaningful statistically.

Table 3. Smoking related characteristics of individuals who were included in the study.

Smoking (n=1169)* Characteristics	Woman		Man		Total		X², P value
	n	%	n	%	n	%	
Try smoking even once							
Yes	267	39.9	313	62.7	580	49.6	X²= 59.863
No	403	60.1	186	37.3	589	50.4	**P= 0.0001**
Total	670	100	499	100	1169	100	
Smoke 100 cigarettes during all of their life							
Yes	217	32.4	289	58.0	506	43.3	X²= 76.509
No	453	67.6	209	42.0	662	56.7	**P= 0.0001**
Total	670	100	498	100	1168	100	
Still smoking							
At least one cigarette per day	133	19.9	196	39.4	329	28.2	
At least one cigarette per week	3	0.4	3	0.6	6	0.5	
Less that one cigarette per week	6	0.9	2	0.4	8	0.6	
I was smoking but I quit	75	11.2	88	17.7	163	14.0	X²= 50.597
Non-smoking	453	67.6	209	42.0	662	56.7	**P= 0.0001**
Total	670	100	498	100	1168	100	
Cigarette Type (n=343)*							
Domestic/Foreign/Filter Tipped	121	85.8	140	70.4	261	76.8	
Plain cigarette	4	2.8	9	4.5	13	3.8	X²= 11.255
Do not Matter	16	11.3	50	25.1	66	19.4	**P= 0.004**
Total	141	100	199	100	340	100	

*Those who did not answer the questionnaire were not included in the evaluation.

RESULTS

Of the 1169 people surveyed, 57.3% were female (n: 670), 77.8% were university graduates, 68.4% were married and 22.4% were physicians. The average age of the subjects is 32.00 (min: 18, max: 48). The socio-demographic and occupational characteristics of the participants are shown in Table 1 and Table 2.

A total of 29.3% of the individuals who were included in the study were still smoking. Smoking rate was 21.2% in female and 40.4% in male (p = 0.0001). The average age of starting smoking was 20.00 (min: 10, max: 39). The smoking characteristics of the individuals included in the extent of research and the smoking status according to occupational groups were shown in Tables 3 and 4.

A total of 51.3% of the individuals who participated in the study states that they started smoking with the influence of a friend; 50.1% of the individuals who participated in the study states that they started smoking because they aspire smoking, 42.2% of the individuals who participated in the study states that they started smoking because of curiosity; 42.2% of the individuals who participated in the study states that they started smoking because of stress, problems, distress; 19.8% of the individuals who participated in the study states that they started smoking because they want to prove they had grown up/braving. In the survey those who never smoke and those quit smoking states that they quit smoking or do not start smoking because; (58.3%) smoking was harmful to health, (44.8%) were dissatisfied with smell and smoke, and (29.6%) did not smoke because of health problems experienced by smokers. 26.4% of people used hookah, 7.5% used cigar and 2.2% used pipes. It was determined that there was no significant difference between the smoking status and the way of working of the individuals included in this the study (p> 0.05). 23.9% of smokers have high or very high levels of addiction (Table 5).

A total of 33.5% of smokers (n = 343) stated that they considered quitting to smoke (n = 115, female: 40.9%, male: 59.1%).

Smoking rates of people who smoke in their families and groups of friends were found to be higher (p <0.005) (Table 6).

Table 4. Smoking status according to occupational groups.

Occupation groups (n=1169)*	Smoking Status						
	Smoker		Non-Smoker		Total		
	n	%	n	%	n	%	
Physician/Dentist	79	23.0	200	24.2	279	23.9	**X^2=3.125**
Health officer/midwife-nurse	179	52.2	459	55.6	638	54.6	**P=0.21**
Other health care personnel	85	24.8	166	20.1	251	21.5	
Total	343	100	825	100	1168	100	

*Those who did not answer the questionnaire were not included in the evaluation.

The question "If you were performing another profession, how would you estimate your cigarette usage status?" was asked the individuals included in this study. 41.3% of the individuals state that their smoking status would not have changed and 31.1% of the individuals state that they did not have any idea and 21.5% of the individuals stated that they might smoke in lesser amounts. Table 7 shows the distribution of opinions about the smoking prohibition around the individuals and smoking prohibition at indoor areas according to the smoking status of the individuals.

A total of 52.4% of the respondents indicated that the warning pictures on the cigarette packets and their effects on quitting smoking were effective. When questioned about the method they used in quitting smoking, 63.9% of them state they quid suddenly, 25.1% state they try to quit by gradually reducing the cigarette amount, 8.0% state they took medical support and 3.0% quit with using herbal treatment. The proportion of that requiring specialist support for quitting smoking was 30.1%. The percentage of those who planned to quit smoking in a smoking cessation campaign in Elazığ was 46.8%. 50.1% of the respondents thought that they were compliant with the legal regulation on smoking in confined spaces.

DISCUSSION

Smoking is an important public health problem that leads to illness, death, economic and work power losses. According to the results of the global adult tobacco research in Turkey, the rate of smoking every day in the whole population is 29.6% (4). According to the World Health Organization 2016 data, the rate of smoking in the world is 21.9%. Health care workers have important responsibilities and duties in combating this problem. In this study, the rate of smoking was found to be 29.3% in physicians, midwives, nurses and other health care workers working in Elazığ province. In other studies involving health workers, smoking rates were determined as 56.5%, 50.6%, 49.8%, 49.3%, 48%, 41.3%, 38.9%, 35.3%, 26.3% (19-27). Looking at the years of studies in which smoking rates are high, it is seen that the studies with higher smoking rates were conducted before 2010. In the study carried out among the assistants specializing in Inonu University Medical School Hospital in 2012, the rate of smoker resident doctors was determined as 24.8% and the rate in our findings was also similar (28). It shows that the efforts to combat smoking addiction in our country and the legal regulations are effective in the health care workers as well as in the general population. However, health professionals, especially physicians and midwives and nurses should not smoke because they have taken as examples by the public.

In our study, smoking rates were 21.2% for females and 40.4% for males (Table 3). Similar studies and studies investigating the smoking rates of the general population in Turkey also found smoking rates in males to be higher than females (19, 24, 25).

Table 5. Fagerström nicotine dependence levels of smokers according to sex.

Fagerström nicotine addiction levels (n=343)*	Female		Male		Total		X^2, P value
	n	%	n	%	n	%	
Very low (0-2 points)	73	51.8	64	32.2	137	40.3	
Low addiction (3-4 points)	29	20.6	58	29.1	87	25.6	
Medium addiction (5 points)	16	11.3	19	9.5	35	10.3	
High addiction (6-7 points)	15	10.6	43	21.6	58	17.1	X^2=6.534
Very high addiction (8+ points)	8	5.7	15	7.5	23	6.8	**P=0.0001**
Total	141	100	199	100	340	100	

*Those who did not answer were not included in the evaluation.

Table 6. Smoking status of individuals included in this study according to the smoking status in their families and social circles.

	Smoking Status						
	Smoker		**Non-Smoker**		**Total**		
	n	**%**	**n**	**%**	**n**	**%**	
Smoking in family (n=1169)*							
None	116	34.1	391	47.7	507	43.7	X^2=18.120
Yes	224	65.9	428	52.3	652	56.3	**P=0.0001**
Total	340	100	819	100	1159	100	
Smoking in social circle (n=1169)*							
None	53	15.6	330	40.3	383	33.1	X^2=66.073
Yes	286	84.4	488	59.7	774	66.9	**P=0.0001**
Total	339	100	818	100	1157	100	

*Those who did not answer the questionnaire were not included in the evaluation.

The mean age of first start of smoking was 20.13 ± 3.8 (min = 10, max = 39) in our study. In a study conducted in Istanbul in 2007, the age of first start of cigarette smoking in health personnel was determined as 21 (23). In another study conducted in Istanbul in 2007, the age of first start of smoking was 19.87 ± 3.7 (29). In a study conducted in Italy, it was determined that the age of onset of cigarette smoking was between 15 and 20 years of age (30). The results are similar to our findings, and it is seen that the age at which the health care workers started to smoke corresponds to the period of high school and university. In a study conducted among medical faculty students, the smoking rate of students was found to be 25.6% and the smoking rate in the same group before the university was reported to be 18.3% (31). Based on these results, it is revealed that schools that provide education for the health sector should provide extensive training on tobacco control during and after graduation.

Table 7. The opinions of the individuals related to smoking in the area they were located according to smoking status.

	Smoking Status (n=1169)*						
	Smoker		**Non-Smoker**		**Total**		
	n	**%**	**n**	**%**	**n**	**%**	
Smoking in the environment you are in							
Do not affect	117	34.3	47	5.7	164	14.1	
I prefer that people don't smoke, but if they smoke I would not be uncomfortable	138	40.5	192	23.4	330	28.4	X^2=2.819
I prefer that people don't smoke, I would be uncomfortable	55	16.1	534	65.1	589	50.7	**P=0.0001**
I don't have an idea.	31	9.1	47	5.7	78	6.7	
Total	341	100	820	100	1161	100	
Smoking prohibition at indoors							
I agree with the prohibition, smoking must be prohibited at indoors	225	66.0	730	89.0	955	82.3	
I don't agree with prohibition, smoking must be allowed with proper ventilation	80	23.5	40	4.9	120	10.3	
It is not a problem for me	13	3.8	13	1.6	26	2.2	X^2=1.037
I do not have an idea.	23	6.7	37	4.5	60	5.2	**P=0.0001**
Total	341	100	820	100	1161	100	

*Those who did not answer the questionnaire were not included in the evaluation.

As reasons for starting smoking, friend influence (51.3%) and wistfulness/curiosity (42.2%) were found to be the most common causes of smoking according to this study. In other studies related to smoking in health care employees, curiosity and aptitude, social environment and friend influence, stress of the working environment were shown as the reasons for starting smoking (21, 22, 25, 29).

When the Fagerström Nicotine Addiction test was performed in smokers, 23.9% of the subjects were found to be highly or very highly addicted (Table 5). In studies conducted in 2000 and 2007, 29.6% and 24.9% of the smoking health personnel respectively, in studies conducted among nurses in 2005 and 2009 17.2% and 26.1% respectively, in studies conducted in health-care college students in 2015 19,3% are found highly or very highly addicted (21, 22, 24, 29, 32).

Smoking rates are increasing in the presence of smokers in family and social circle (Table 6, $p = 0.0001$). In similar studies, it is reported that the smoking rates of people in the presence of smokers in their families were 45.7% (only in fathers), 69.0%, 69.6%, 70.9% respectively and the smoking rates of people in the presence of smokers in their social environment were%64.4 (21, 22, 24, 25).

More than half of the respondents to the study indicated that the warnings on cigarette packets were effective on smoking cessation, and three quarter of the respondents stated that they agree the prohibition on smoking in closed environments (Table 7, $p = 0.0001$). 92% of the participants in the study performed by Kosku et. al. agreed the requirement of warning signs and photographs on cigarette packs and 98.0% of the participants in the study performed by Kosku et. al. agreed that smoking must be prohibited in closed environments belonged to public (19).

The number of persons participating in the study together with is enough to represent the sample even though whole sample size cannot be included because of those who did not wish to participate, those who were on annual leave, those who were on sick leave and those who could not participate because of other reasons.

As a conclusion, approximately one-third of health care employees smoke cigarette. Addiction levels are quiet high and the percentage of those who plan to quit smoking is also low. Health care workers have an important place in tobacco control work, especially in the treatment of nicotine addiction. For these studies to be successful, first of all, health care workers who should serve as an example to public should not use cigarettes. Smokers must also actively participate in smoking cessation studies and therapies. Therefore, there is a need for awareness-raising training programs and regulations to reduce smoking rates for health caare workers, which are role models for the society.

Conflicts of Interest

None to declare.

Financial disclosure

None to declare.

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